

Applicant : Moncef Jendoubi
Appl. No. : 09/930,715
Examiner : My-Chau T. Tran
Docket No. : 705403.6 (formerly 266/226)

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-13. (Cancelled).

14. (Currently Amended) A method to analyze differential gene expression in human tissue samples ~~derived from different biological conditions~~ comprising ~~of~~ the steps of:

~~containing~~ obtaining at least two protein samples from a human; ~~wherein the at least two samples are comprised of proteins expressed as gene products in distinct biological conditions;~~

~~containing the proteins and~~ contacting each of the at least two samples in discrete areas of an array that physically separates the at least two samples,

providing a plurality of antibodies each having a ~~signaling~~ labeling element wherein each member of the plurality of antibodies binds ~~is identified as having specific binding affinity~~ to an expression product of a gene sequence,

contacting each of the at least two samples with the member of the plurality of antibodies at the discrete areas of the array,

detecting an antibody-binding reaction between the member of the plurality of antibodies and the proteins contained at the discrete areas of the array by detecting the labeling ~~signaling~~ element, and

identifying differential gene expression between the at least two distinct biological conditions by correlating differences in the antibody binding reaction in the at least two samples with expression of the gene sequence identified with the member of the plurality of antibodies.

15. (Previously Presented) The method of claim 14 wherein the step of providing a plurality of antibodies is comprised of obtaining *in vivo* expression of the gene sequence to yield murine polyclonal antibodies having specific binding affinity to the expression product of the gene sequence.

16. (Previously Presented) The method of claim 14 wherein the step of contacting the at least two samples with the member of the plurality of antibodies is performed on at least 100 samples.

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17. (Previously Presented) The method of claim 14 wherein the ~~step of containing~~ at least two samples from a human ~~wherein the at least two samples~~ are comprised of ~~proteins expressed as gene products in distinct biological conditions is comprised of providing~~ a first sample comprised of protein extract from normal human tissue and a second sample comprised of protein extract from a diseased sample of the same tissue.

18. (Previously Presented) The method of claim 17 wherein the second sample is protein extract from cancer cells or tissue.

19. (Previously Presented) The method of claim 17 wherein the diseased sample results from exposure to a chemical agent.

20. (Previously Presented) The method of claim 18 wherein the identifying step is comprised of identifying genes that are differentially expressed in cancerous tissue.

21. (Previously Presented) The method of claim 14 further comprising the step of identifying the expression product of the gene sequence.

22. (Cancelled)

23. (Cancelled)